

Cancer Program Annual Report 2014 Calendar Year



Minneapolis VA Health Care System

October 2015



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Minneapolis VA Health Care System Cancer Program 2014/2015 Annual Report

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- *David Miller, Chief Experience Officer (Alternate)*

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*Pankaj Gupta, MD Hematology/Oncology
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Minneapolis VA Medical Center Cancer Program 2014 Annual Report

HEMATOLOGY/ONCOLOGY SECTION

The focus of the Hematology/Oncology Section is to provide quality comprehensive cancer patient care, to conduct both clinical and laboratory cancer research programs to improve the care and outcome of our VA cancer patients, and to educate trainees in cancer care. The section has nine full-time staff physicians, four physician's assistants, two advanced practice nurse navigators, a pharmacist, and an Oncology social worker. The Hematology/Oncology Section provides both inpatient and outpatient consultative services for the evaluation and care of approximately 30 new patients weekly. The Hematology/ Oncology Section members also provide primary inpatient care on the 3FO Red Medicine Service, which is staffed by a physician's assistant and the staff physicians.

The Hematology/Oncology Section also participates in the residency and fellowship training programs of the University of Minnesota, as well as serving as a training site for PA students from the Des Moines, Augsburg and Bethel programs. Trainees work with a designated staff member in the outpatient clinics and on the consultation service. Generally, patient-based teaching for trainees occurs in the setting of the consulting service and most often includes a Hematology/Oncology fellow, various house staff (primarily medicine or medicine-pediatrics), medical students from the University of Minnesota Medical School, and other trainees.

The Section is an affiliate member of the Alliance/Cancer and Leukemia Group B (CALGB) through the University of Minnesota. This cooperative group/NCI affiliation offers the section the opportunity to provide state of the art clinical trials in breast, lung, genitourinary, and gastrointestinal malignancies, and leukemia and lymphoma. In addition, patients have access to trials for other cancers, sponsored by other cancer groups and pharmaceutical companies. The section members are also members of the University of Minnesota Cancer Center.

Section members are collaborating on a host of quality improvement projects on an on-going basis. These include inter-specialty care coordination agreements, initiatives to improve patient education and medication management, navigation services, and early integration of palliative care services in advanced malignancy

HEM-ONC AMBULATORY CLINIC

Ambulatory evaluation of consultations, follow up of established patients and same day assessment of urgent problems are services provided through the Hem-Onc Outpatient (Ambulatory) Clinic, located on 3V. The Hematology/ Oncology section clinic has approximately 5700 outpatient provider visits annually. In addition, providers manage patients at remote locations via telemedicine visits.

Chemotherapy education is provided by an advanced practice Hematology/Oncology nurse navigator who meets with individual patients and their families to provide personalized

chemotherapy education, informational brochures, packets and educational DVDs for reinforcement of their learning. When a nurse navigator is unavailable, back up services for patient education are provided by chemotherapy nurses in the Hem-Onc Procedure clinic. Patients who are receiving oral chemotherapy are assessed prior to and early during their course of treatment by a chemotherapy pharmacist, in order to assess baseline and interval development of symptoms and to insure patient compliance with medication self-administration.

Patient screening for psychosocial distress is coordinated by the clinic's social worker using a self-assessment tool. The nurse navigators are also available by phone to talk with patients for problems or questions.

HEM-ONC PROCEDURE CLINIC

The Hematology-Oncology Procedure Clinic is co-located within the medicine ward 3F, where inpatients receiving cancer treatments are typically admitted. Procedure Clinic staff provide supportive therapies and cancer treatment to outpatients and those inpatients who are not on a medical service. The physical facility for treatment includes 18 patient bays, with an adjacent patient lounge for patients and family. Educational materials are available there as well as in the patient education library on the first floor. Trudy Harpole is nurse manager and Jacqueline Goettl is assistant nurse manager of the Hem-Oncology Procedure Clinic. The center provides outpatient care five days per week and is staffed by six full time registered nurses, four of whom are Oncology-certified nurses. Four physician assistants and an Oncology Social Worker also support patient care. There is also a dedicated psychologist who is available for mental health issues. The nursing staff serves the outpatient Hematology/Oncology clinics, administers chemotherapy, and provides other patient care needs, such as the transfusion of blood products, antibiotics, and immunoglobulin therapy and integrative care modalities. Vascular access device care, symptom management, and patient education are also provided by the nursing staff. Any necessary weekend chemotherapy administration is provided by a designated chemotherapy-trained staff of inpatient care nurses. Approximately 300-400 treatments are provided in the clinic monthly. A home infusion chemotherapy program is available to select patients, as identified by the providers and nursing staff. For patients receiving home infusion chemotherapy who live remotely from the Minneapolis facility, some Community Based Outpatient Clinics (CBOC's) have been trained and have begun assisting with co-management of home infusions. The Hem-Onc Procedure Clinic also provides access to the physical and occupational therapy programs, including the Rehabilitation Service and the Palliative Care program.

Submitted by: Sharon Luikart, MD, Chief Hematology Oncology

Cancer Navigators

In May of 2015 one Advance Practice Nurse (APRN) was added to the Hematology/Oncology Department to incorporate the role of an Oncology Nurse Navigator. The new role focused on coordinating the initial diagnostic workup, chemotherapy education and communication between our

facility and outside community institutions. A second APRN joined the department at the end of August 2015. All patients being considered for bone marrow transplant are now assigned to the Bone Marrow Transplant Nurse Navigator and are co-managed along with their oncology provider.

RADIATION ONCOLOGY 2014

The Department of Radiation Oncology treats approximately 500 new cancer patients a year. It is a regional VA Radiation Oncology Department and provides radiation therapy services for a five-state area of the Midwest. The department provides both outpatient and inpatient consultative services and is available for emergency consultations 24 hours a day, 365 days a year.

The department provides the following radiotherapy treatments: external beam radiotherapy including 3D conformal radiotherapy and intensity-modulated radiotherapy (IMRT), stereotactic ablative radiotherapy and prostate brachytherapy. Patients requiring other specialized radiation therapy procedures, such as gamma knife radiosurgery, are referred to the University of Minnesota Medical Center Department of Radiation Oncology, in Minneapolis.

Equipment includes two Varian Clinac iX linear accelerators both with dual-energy 6 MV and 18 MV photons and a spectrum of 6 to 20 MeV electrons, image-guided radiotherapy (IGRT) with on-board imaging and cone-beam CT, respiratory gating technology, Philips large-bore 16 slice 4DCT simulator, Pinnacle Treatment Planning System, Variseed intraoperative brachytherapy treatment planning system and Aria Record-and-Verify. Our dosimetry data has been reviewed and approved by the Radiological Physics Center (RPC).

The personnel of the department includes two radiation oncologists, two PhD medical physicists, two certified medical dosimetrists, seven radiation therapy technologists, one OCN-certified clinical nurse specialist, one LPN, and one medical support assistant.

The department, including the prostate brachytherapy program, is fully accredited by the American College of Radiology (ACR) and The Joint Commission (TJC). Additionally we are affiliated with the University of Minnesota, and our radiation oncology physicians hold faculty appointments there. Radiation Oncology residents from the University of Minnesota currently rotate through the department on a regular basis. The department also offers rotations for Medical Dosimetry students from the University of Wisconsin-Lacrosse and Radiation Therapy Technology students from the Fairview School of Radiation Therapy

The department participates in the Cancer Committee, Radiation Safety Committee, and various multidisciplinary tumor conferences. The department participates in multi-institutional clinical protocols through The Alliance for Clinical Trials in Oncology.

Quality control and quality assurance of radiation therapy treatment and prostate brachytherapy is carried out based on practice guidelines and technical standards from the following: ACR, AAPM, NHPP, and NRC.

Submitted by: Joaquin Silva, MD, Chief Radiation Oncology

2014 Annual Report of Quality Improvements for the Cancer Program

RENAL STUDY AND IMPROVEMENT PROJECT

A study of renal masses was completed by Dr. Risk and reported at the May 12th 2014 Cancer Committee meeting. The study focused on whether the renal masses are being referred appropriately to the Urology service for evaluation and also if these masses were being monitored and tracked appropriately (similar to tracking of lung nodules). The study concluded that all patients with renal masses had appropriate referrals and follow-up with the Urology service. However, the study revealed that seventeen cases of renal masses diagnosed as suspicious for probable cancer, over the past four years were not been captured in the Cancer Registry. As a result of the findings, the service has expanded the criteria for identification of a suspicious renal tumor, which will result in a complete capture of all renal masses.

HEMATOLOGY/ONCOLOGY DELAY STUDY AND IMPROVEMENT PROJECT

The Hematology/Oncology clinic completed a study on the delays in chemotherapy administration for patients in the clinic in 2014. The study concluded that the average time from the completion of the order for the chemotherapy drugs to start of the infusion was greater than 2 hours. As a result of the study, the Hematology/Oncology team, added a second pharmacy technician to assist with preparation of the chemotherapy drugs for infusion. This addition of pharmacy staff decreased the time from order completion to start of infusion by 7%. The Hematology/Oncology team continues to look for ways to eliminate waste in the process and decrease wait time for the patients. They are currently reviewing the impact of nursing time involved in activities such as blood draws and IV starts.

PERFORMANCE MEASURES FOR CANCER SCREENING

By the end of the 3rd quarter of 2015, the Minneapolis VA Health Care System was successfully meeting all the performance measures related to cancer screening for the Year to Date data (see table below).

FY15 EPRP Dashboard													
Measure #	Description	Target	Q1-FY15	Q2-FY15	Apr-15	May-15	Q3-FY15	Jun-15	Change from prior mo	Num	Denom	YTD%	
1.3	Prevention												
p31h	Breast Cancer screen- 50-69 yrs (HEDIS)	77%	83%	84%	94%	87%	91%	100%	↑	89	105	86%	
p41h	Cervical CA screen q3 yrs- 21-64 yrs (HEDIS)	86%	80%	92%	84%	84%	85%	87%	↑	128	148	87%	
p42	Cervical CA screen 21-29 yrs (HEDIS)		100%	100%	100%	100%	85%	100%	=	28	29	96%	
p43h	Cervical CA screen 30-64 yrs (HEDIS)		76%	90%	81%	83%	85%	84%	↑	100	119	84%	
p61h	CRC screening approp- 50-75 yrs (HEDIS)	67%	78%	83%	93%	79%	86%	78%	↓	607	720	83%	
p26h	Influenza Immunization-18-64 yrs - (HEDIS)	58%	na	na	65%	59%	62%	71%	↑	84	133	62%	
p25h	Influenza Immunizations - > 65 yrs (HEDIS)	76%	na	na	77%	84%	81%	71%	↓	110	135	81%	
1.4	Tobacco												
smg8	Tobacco in past yr provided w/counseling	83%	100%	97%	100%	100%	99%	100%	=	244	288	98%	
smg9	Tobacco in past yr offered referral	58%	94%	97%	100%	100%	98%	98%	↓	237	248	97%	
smg10	Tobacco in past yr who have been offered meds	63%	89%	97%	100%	100%	98%	100%	=	238	248	96%	

Submitted by:

Susan Chatten, RN, BSN, Quality Consultant

Minneapolis VA HCS Cancer Prevention Programs 2014-2015

MVAHCS follows the U.S. Preventive Services Task Force recommendations for prevention and early detection of cancer. The MVAHCS supports on-going Tobacco Cessation efforts. Our Program of support includes:

- Provider advice and support
- 3-session group tobacco cessation program
- 8-session individual tobacco cessation program
- Pharmacist Tobacco cessation management
- Nicotine replacement and other mediations including Bupropion (Zyban) and Varenicline (Chantix)
- Telehealth offers a continuous 90 day program where veterans receive an in-home device that allows contact with providers.
- VA also supports telephone “Quit Lines” such as 1-855-QUIT-VET (1-855-784-8838), and 1-800-QUIT-NOW (784-8669). There is also a TRICARE Quit Line 1-866 459-8766. A text message support line is also available from Smokefree VET.

The number of patients participating in cessation educational groups during 2013 was 133, and during 2014 the number of participants was 137. Many more patients work on cessation with their primary care provider. Nicotine replacement products were prescribed for 3,486 unique patients during 2014 and Varenicline (Chantix) was prescribed for 370 unique patients. Numbers could not be obtained for Bupropion (Zyban) because it is also a commonly prescribed antidepressant (Wellbutrin).

Program Information is available on-line for the public at the Minneapolis VA Internet site:

www.minneapolis.va.gov >Health > Wellness Programs >Quit Smoking.

Information is also available for employees through the Minneapolis VA Intranet site at:

<http://minneapolis.va.gov/> >About VA > Health > Health Care Information > Wellness Programs > Quit Smoking. A SharePoint has been created on the Minneapolis VA Intranet, which lists facility specific and other information. It is under Veterans Health Education/Promotion/Prevention, Lists/Sites: Tobacco Cessation Resources.

The Minneapolis VA Health Care System also offers a weight management program called MOVE for both patients and employees.

CANCER CONFERENCES

During 2014 the Minneapolis VA had a very active Cancer Conference schedule. The purpose of a cancer conference is to prospectively present selected cancer cases in order to discuss treatment management options in a multidisciplinary setting. The conferences also offer an educational opportunity for physicians working or in training at the facility. Conferences represent the facilities top cancer sites. The CoC has established that at least 15% of the annual analytic cancer case load must be presented at a cancer conference. Approximately 461 of our 1,080 new analytic cases, or 43%, were presented. Conferences were well attended with a total conference attendance for the year of 1,587 participants. The facilities ENT conference also offers Continuing Medical Education (CME) credits for attendees. Our Colo-Rectal Conference was affected by physician staff turnover in 2014.

The following conferences were held in 2014:

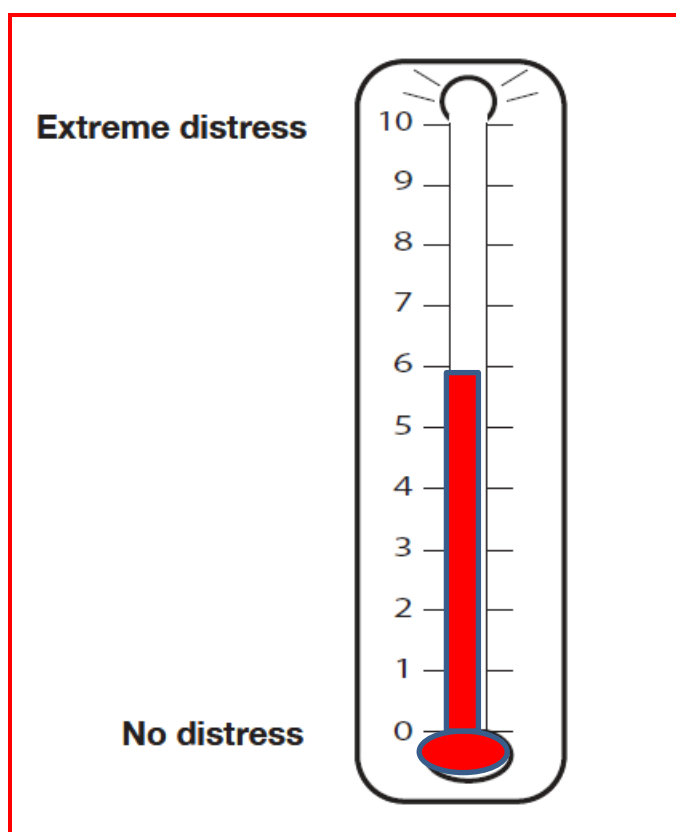
2014 Cancer Conferences			
	# Conferences	# Patients Presented	# Participants
Urology	10	67	78
Chest	47	203	851
Colo-Rectal	3	15	31
ENT	38	92	541
Liver	15	84	86

Submitted by: Patricia Albrecht, CTR

Psychosocial Distress Screening

In 2014 distress screening for patients with a new cancer diagnosis was implemented in the Hematology Oncology Clinic. Distress screening is a method to facilitate early intervention to assist patients with the social and emotional side of a cancer diagnosis.

This intervention is part of the Commission on Cancer's Patient Focused Standards. You will see this intervention rolled out into other areas serving our VA cancer patients as well.



CANCER REGISTRY

The Cancer Registry serves as a resource for the collection, management and analysis of data on persons with a diagnosis of cancer, as well as certain types of benign tumors. All patients initially diagnosed and/or receiving all or part of their initial treatment for cancer at the Minneapolis VA Health Care System (MVAHCS) are considered *Analytic Cases* and are accessioned into the registry and followed throughout their lifetime. Patients receiving subsequent treatment at MVAHCS, are also accessioned (effective 1/1/2010). These cases as well as cases diagnosed at autopsy and those reportable by agreement (and not collected by the Commission on Cancer) are included in the *Non-analytic* category. The primary goal of the Cancer Registry is to provide data and statistics which can be utilized to evaluate the success of specific treatment modalities, as measured by the disease free interval and length of survival. Data collected is used by the hospital's medical staff and ancillary services and by the VA Central Cancer Registry (VACCR). Data on Minnesota residents is also sent to the Minnesota Department of Health (MDH) because cancer is a reportable diagnosis. The MDH follows VA guidelines for protecting the confidentiality of this data. The MDH analyses the State data for trends in the incidence of cancer, looking for possible cancer clusters and it also examines the data for populations that may be underserved in the provision of health and screening care.

The Minneapolis VA Medical Center has compiled data on cancer patients since 1961, however the computerized database dates back to only 1988. The Cancer Registry now uses the "OncoTraX" software package developed by The Veteran Affairs Oncology Program. Currently 27,583 tumors are available in the computer database. There are approximately 8,068 analytic patients requiring active follow-up according to the Commission on Cancer rules. The registry has consistently maintained follow-up in compliance with CoC standards.

The Cancer Registry is currently staffed with 3 FTE's. There is one CTR lead, and 2 part-time CTR's doing case abstracting. There is one additional FTE doing follow-up and placement and tracking of AJCC Cancer Staging Forms.

During 2014 the Cancer Registry processed 23 requests for information, contributing to four IRB approved studies.

Cancer Registry Statistics and Workload

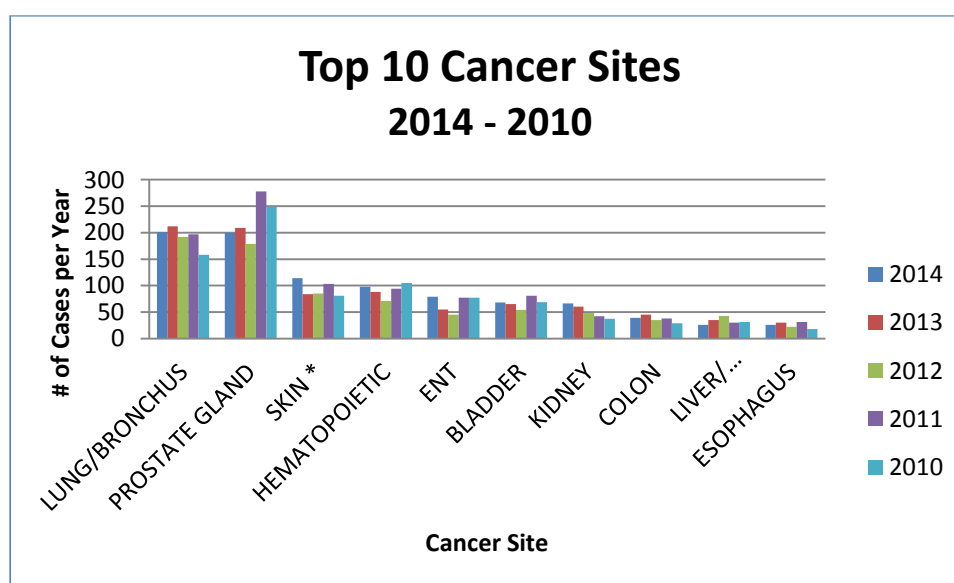
The table on the following pages lists the cases accessioned into the Cancer Registry from 2010 to 2014; by primary site. The number of analytic cases has remained fairly consistent; with 1,026 in 2010, and 1,080 in 2014. Total registry cases (analytic and non-analytic) have also been fairly constant during this time period with 1,223 in 2010 to 1,225 in 2014. There has been a notable increase in cases accessioned since the late 1990's. In the period from 1995-1999 there was an average of 703 analytic cases accessioned and 759 total cases.

Submitted by: Patricia Albrecht, CTR

TOP PRIMARY SITES 2010 -2014

In 2014 the Minneapolis VA Health Care System's top cancer sites were once again lung and prostate cancer. Esophagus cancer was added to the top 10 list and lymphoma cases were down in 2014.

Top 10 Primary Sites					
# Analytic Cases 2014-2010					
Primary Site:	2014	2013	2012	2011	2010
LUNG/BRONCHUS	201	212	192	197	158
PROSTATE GLAND	200	209	179	278	249
SKIN *	114	84	85	103	81
HEMATOPOIETIC	98	88	71	94	105
ENT	79	55	45	77	77
BLADDER	68	65	54	81	69
KIDNEY	66	60	48	42	37
COLON	39	45	35	38	29
LIVER/ INTRAHEPATIC BILE DUCTS	26	35	43	30	31
ESOPHAGUS	26	30	22	31	18



*Skin sites represent primarily melanoma (107 of 114 cases) with 57% of these stage 0 (61/107). The remaining 7 skin cases included Merkel Cell Carcinoma, CTCL, Paget's Disease and squamous or basal cells reportable by agreement (stage III or IV at diagnosis and canthus of the eye).

Cancer Registry Annual Case Summary Report 2010 - 2014 (page 1 of 3)

Distribution of Primary Cancer Sites

Minneapolis VA Health Care System

Note: Categories with no cases were removed from the table.

ANNUAL CASE SUMMARY	2014			2013			2012			2011			2010		
System: C00 Lip/Oral Cavity/Pharynx	TOTAL CASES	ANALYTIC CASES	NON-ANALYTIC	TOTAL CASES	ANALYTIC CASES	NON-ANALYTIC	TOTAL CASES	ANALYTIC CASES	NON-ANALYTIC	TOTAL CASES	ANALYTIC CASES	NON-ANALYTIC	TOTAL CASES	ANALYTIC CASES	NON-ANALYTIC
LIP	12	12		1	1		9	7	2	16	16		18	16	2
TONGUE, BASE	3	3		2	2		4	4		5	5		7	7	
TONGUE, OTHER/NOS	8	8		6	6		6	5	1	6	6		7	7	
GUM	2	2		1	1								2	2	
FLOOR OF MOUTH	3	3		6	6		1	1		3	3		1	1	
PALATE	1		1	2	2		2	2		3	3		1	1	
OTHER/NOS MOUTH PARTS	1	1		4	4					1	1		3	3	
PAROTID GLAND	1	1		2	1	1	4	3	1	4	4		2	2	
MAJOR SALIVARY GLANDS,										1	1				
TONSIL	14	14		12	11	1	7	6	1	7	7		9	8	1
OROPHARYNX	5	5		2	2					5	4	1	5	5	
NASOPHARYNX	4	4		2	2		1	1		3	3		1	1	
PYRIFORM SINUS	3	3		2	2		2	2		5	5		1	1	
HYPOPHARYNX	1	1					1	1							
OTHER LIP/ORAL				2	2								1	1	
SUBTOTAL	58	57	1	44	42	2	37	32	5	59	58	1	58	55	3
System: C15 Digestive Organs															
ESOPHAGUS	31	26	5	33	30	3	24	22	2	32	31	1	20	18	2
STOMACH	15	15		19	14	5	13	11	2	29	23	6	20	12	8
SMALL INTESTINE	4	2	2	4	3	1	1		1	3	3		7	4	3
COLON	42	39	3	46	45	1	45	35	10	45	38	7	31	29	2
RECTOSIGMOID JUNCTION	1	1		2	2		6	5	1	2	2		5	5	
RECTUM	9	9		17	17		20	16	4	22	21	1	22	19	3
ANUS/ANAL CANAL	3	2	1	2	1	1	6	3	3	4	3	1	6	6	
LIVER/INTRAHEPATIC BIL	34	26	8	41	36	5	49	43	6	36	30	6	32	31	1
GALLBLADDER							3	2	1				1	1	
BILARY TRACT - OTHER/N	5	5		6	3	3	5	5		3	3		5	5	
PANCREAS	22	19	3	24	22	2	27	26	1	28	26	2	29	28	1
OTHER-DIGESTIVE ORGANS	3	2	1	2	2		1	1		3	3				
SUBTOTAL	169	146	23	196	175	21	200	169	31	207	183	24	178	158	20

Cancer Registry Annual Case Summary Report 2010 - 2014 (page 2 of 3)

Distribution of Primary Cancer Sites

Minneapolis VA Health Care System

Note: Categories with no cases were removed from the table.

ANNUAL CASE SUMMARY	2014			2013			2012			2011			2010		
	TOTAL CASES	ANALYTIC CASES	NON-ANALYTIC	TOTAL CASES	ANALYTIC CASES	NON-ANALYTIC	TOTAL CASES	ANALYTIC CASES	NON-ANALYTIC	TOTAL CASES	ANALYTIC CASES	NON-ANALYTIC	TOTAL CASES	ANALYTIC CASES	NON-ANALYTIC
System: C30															
Respiratory System/															
Intrathoracic Organs															
NASAL CAV,MIDDLE EAR				1	1		1	1		1	1				
ACCESS SINUSES										1	1		1	1	
LARYNX	23	22	1	12	12		14	12	2	17	17		24	21	3
TRACHEA															
LUNG/BRONCHUS	212	201	11	224	212	12	208	192	16	209	197	12	169	158	11
THYMUS				1	1		1	1							
HEART/MEDIASTINUM/															
PLEURA	1		1	3	3		5	4	1	5	4	1	3	2	1
SUBTOTAL	236	223	13	241	229	12	229	210	19	233	220	13	197	182	15
System: C40															
Bone/Joint/ Cartilage	4	4		2	2		1	1		2	2		1	1	
SUBTOTAL	4	4	0	2	2	0	1	1	0	2	2	0	1	1	0
System: C42															
Hematopoietic/															
Reticuloendothelial	118	98	20	98	88	10	84	71	13	111	94	17	130	105	25
SUBTOTAL	118	98	20	98	88	10	84	71	13	111	94	17	130	105	25
System: C44 Skin															
(excluding reproductive)	125	114	11	95	84	11	108	85	23	113	103	10	100	81	19
SUBTOTAL	125	114	11	95	84	11	108	85	23	113	103	10	100	81	19
System: C48															
Retroperitoneum/															
Peritoneum	1	1		2	1	1	2	2		1	1		2	2	
SUBTOTAL	1	1	0	2	1	1	2	2	0	1	1	0	2	2	0
System: C49															
Connective/															
Subcutaneous/ Other															
Soft Tissue	4	4		7	4	3	8	8		6	4	2	7	6	1
SUBTOTAL	4	4	0	7	4	3	8	8	0	6	4	2	7	6	1
System: C50 Breast															
(excluding Skin)	11	10	1	9	5	4	12	8	4	11	5	6	6	4	2
SUBTOTAL	11	10	1	9	5	4	12	8	4	11	5	6	6	4	2
System: C51 Female															
Genital Organs															
VULVA	1	1					2	1	1	2	2				
CERVIX UTERI	7		7	4		4	2		2	10		10	7		7
CORPUS UTERI	2	2		1	1					2	2		2	1	1
OVARY	1	1											1	1	
SUBTOTAL	11	4	7	5	1	4	4	1	3	14	4	10	10	2	8

Cancer Registry Annual Case Summary Report 2010 - 2014 (page3 of 3)

Distribution of Primary Cancer Sites

Minneapolis VA Health Care System

Note: Categories with no cases were removed from the table.

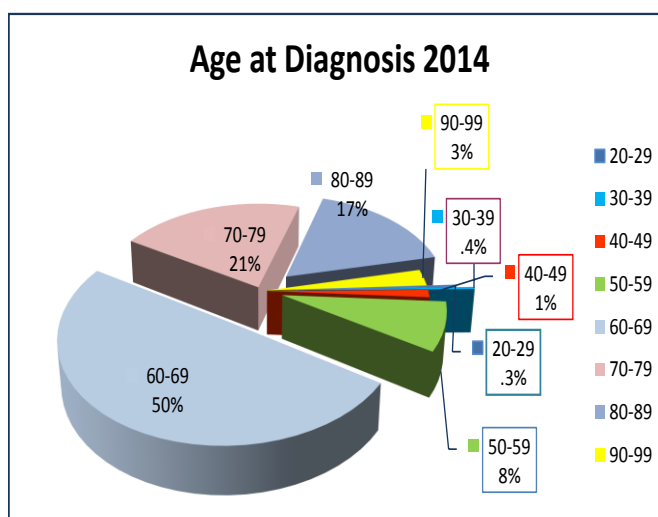
ANNUAL CASE SUMMARY	2014			2013			2012			2011			2010		
System: C60 Male Genital Organs	TOTAL CASES	ANALYTIC CASES	NON-ANALYTIC	TOTAL CASES	ANALYTIC CASES	NON-ANALYTIC	TOTAL CASES	ANALYTIC CASES	NON-ANALYTIC	TOTAL CASES	ANALYTIC CASES	NON-ANALYTIC	TOTAL CASES	ANALYTIC CASES	NON-ANALYTIC
PENIS	3	3		5	5		4	4		3	3		4	4	
PROSTATE GLAND	253	200	53	285	209	76	248	179	69	345	278	67	324	249	75
TESTIS	2	2		1	1		5	5		2	2		4	4	
MALE GENITALIA, OTHER/										1	1		1	1	
SUBTOTAL	258	205	53	291	215	76	257	188	69	351	284	67	333	258	75
System: C64 Urinary Tract															
KIDNEY	72	66	6	70	60	10	52	48	4	49	42	7	43	37	6
RENAL PELVIS	6	6		4	4		2	2		6	6		6	6	
URETER	3	3		4	3	1	5	5		3	3		3	3	
BLADDER	72	68	4	73	65	8	68	54	14	85	81	4	79	69	10
URINARY ORGANS- OTHER/N	3	3		2	2		2	1	1	5	5		1	1	
SUBTOTAL	156	146	10	153	134	19	129	110	19	148	137	11	132	116	16
System: C69 Eye/ Brain/ Other CNS															
EYE/ADNEXA	3	2	1	2		2	3	3		1	1		2		2
MENINGES	12	11	1	9	7	2	6	6		10	9	1	5	4	1
BRAIN	9	8	1	6	5	1	12	10	2	12	11	1	8	7	1
SP CORD, CRANIAL NERVES	3	1	2	1	1		1	1		6	5	1	2	1	1
SUBTOTAL	27	22	5	18	13	5	22	20	2	29	26	3	17	12	5
System: C73 Thyroid/ Other Endocrine															
THYROID GLAND	9	9		12	11	1	10	8	2	11	11		8	5	3
OTHER ENDOCRINE GLANDS	3	3		3	3		3	2	1	2		2	5	5	
SUBTOTAL	12	12	0	15	14	1	13	10	3	13	11	2	13	10	3
System: C76 Other/ Ill-defined site	1	1								2	2		3	3	
SUBTOTAL	1	1	0	0	0	0	0	0	0	2	2	0	3	3	0
System: C77 Lymph Nodes															
LYMPH NODES	24	23	1	39	35	4	38	34	4	48	43	5	27	22	5
SUBTOTAL	24	23	1	39	35	4	38	34	4	48	43	5	27	22	5
System: C80 Unknown Primary	10	10		14	14		13	12	1	15	13	2	9	9	
SUBTOTAL	10	10	0	14	14	0	13	12	1	15	13	2	9	9	0
TOTAL	1225	1080	145	1229	1056	173	1157	961	196	1363	1190	173	1223	1026	197

PATIENT DEMOGRAPHICS (Analytic Cases 2014)

Age at Diagnosis

In 2014, 49.72% of our patient's with a new reportable neoplasm were between the ages of 60-79. 20.93% of our patients were in the 70-79 year old age group. Over the years the percentage of cases diagnosed in a particular age range have remained remarkably similar.

Analytic Cases 2014		
Age Group	# of Cases	% of Cases
20-29	3	0.28%
30-39	4	0.37%
40-49	13	1.20%
50-59	86	7.96%
60-69	537	49.72%
70-79	226	20.93%
80-89	182	16.85%
90-99	29	2.69%
Total	1080	100.00%



Distribution by Gender and Race

In 2014, 97% of our patients with a new reportable neoplasm were male, and 93.7% were Caucasian. These numbers are nearly identical to those in 2013.

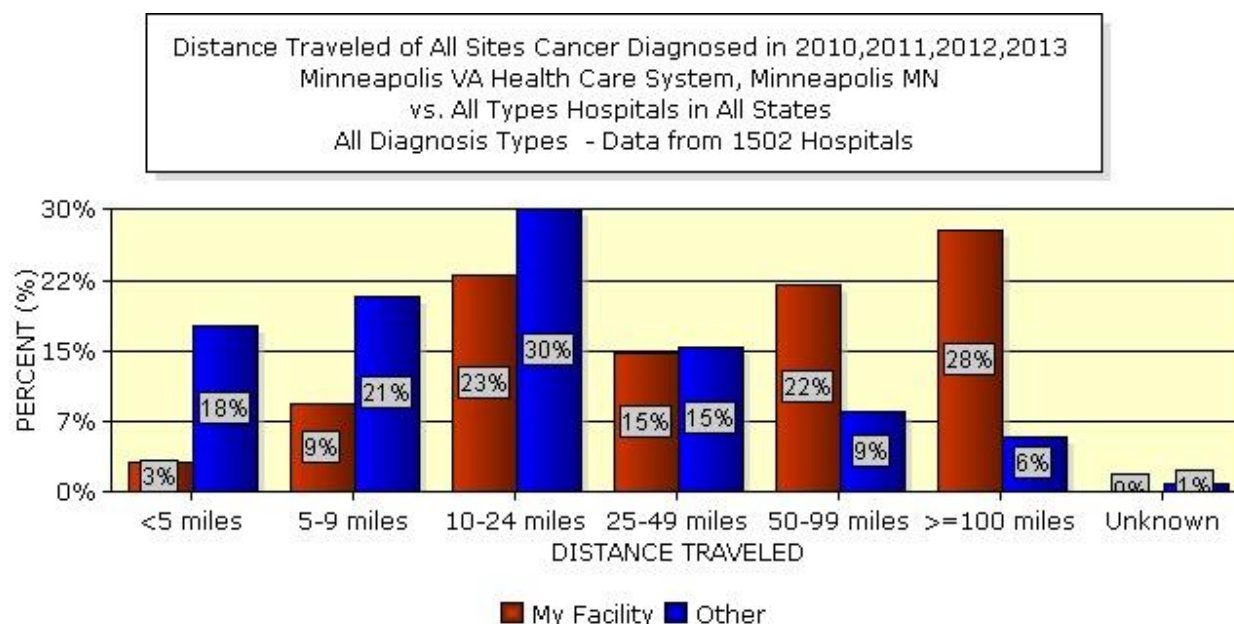
2014 Analytic Cases		
Gender	# Patients	% of Total
Female	28	3%
Male	1053	97%
Total	1080	100%

2014 Analytic Cases MVAHCS by Race		
Race	# Patients	% of Patients
Native American, Eskimo	10	.9%
Black	40	3.7%
Hawaiian, Pacific Islander	1	.1%
White	1012	93.7%
Unknown/Unspecified	17	1.6%
Total	1080	100.0%

Distance Traveled (MVAHCS vs. All CoC Hospitals 2010 to 2013)

The distance that our patients travel for treatment is a factor that VHA is working to improve for our patients. In 2014 VHA implemented the Veterans Choice Program which we hope may impact our numbers at least for the patient treatment component of our Cancer Program.

Comparing the distance that our patients travel for treatment against data for all other CoC approved hospitals compiled by the National Cancer Database, we see that approximately 28% of our patients travel 100 miles or more, compared to 6% for all other hospitals. Conversely only 12% of our patients travel 9 miles or less compared to 39% for all other CoC approved hospitals nationwide. (2014 data was not yet available).

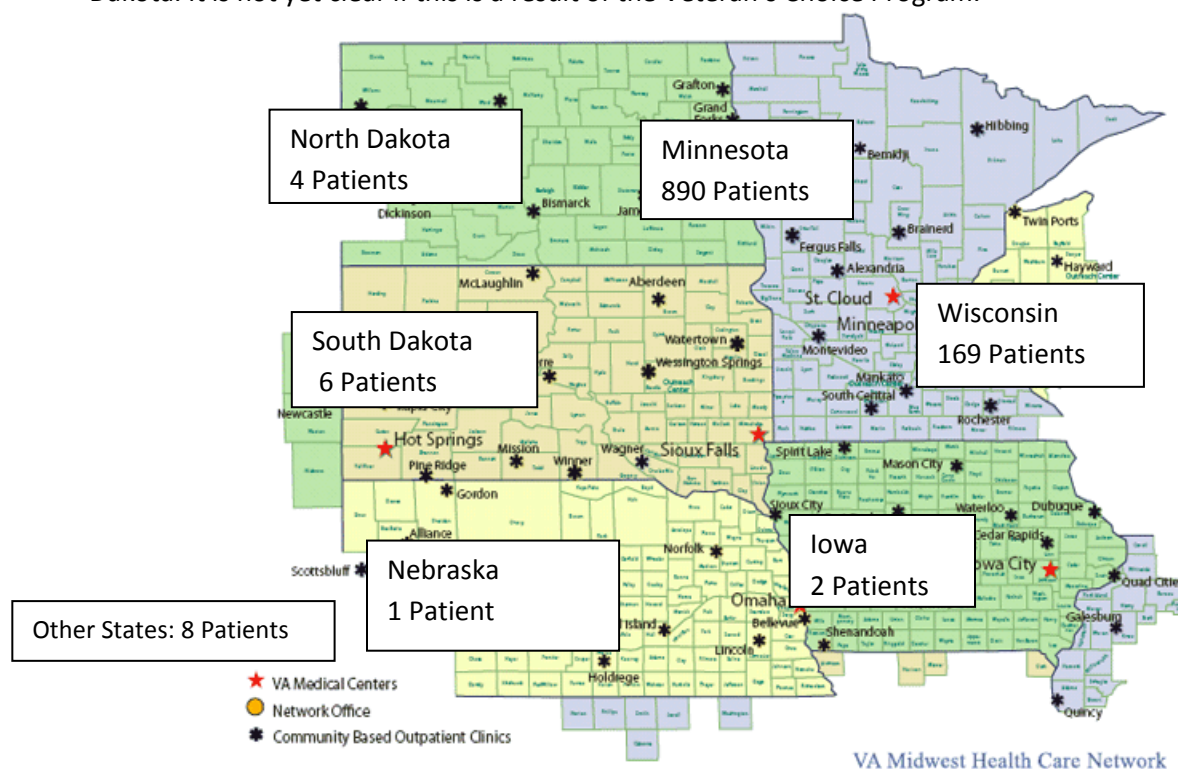


	<5 miles	5-9 miles	10-24 miles	25-49 miles	50-99 miles	>=100 miles	Unknown
My Facility	3%	9%	23%	15%	22%	28%	0%
Other	18%	21%	30%	15%	9%	6%	1%

2015 National Cancer Data Base (NCDB)/ Commission on Cancer (CoC)/ Thursday 10/29/2015.

2014 State of Residence at Diagnosis

The Minneapolis VA Medical Center is a Regional Referral Center with patients referred primarily within the area representing VISN 23. Approximately 82% (890/1080) of our new analytic patients in 2014 were residents of Minnesota. Approximately 16% (169/1080) were residents of Wisconsin. Only 2% (21/1080) of our patients came from other states in 2014 with 16 fewer coming from North and South Dakota. It is not yet clear if this is a result of the Veteran's Choice Program.



County of Residence at Diagnosis

Approximately 60% of our patients reside in the counties making up or immediately surrounding the metropolitan area, the remaining 40% reside outside of the metro area.

METRO COUNTIES AT DIAGNOSIS	
ANOKA	54
CARVER	9
DAKOTA	81
HENNEPIN	247
RAMSEY	86
SCOTT	27
WASHINGTON	34
Total	538
% of MN Cases	538/890 = 60%



Facility Referred From:

Patients from a wide variety of facilities are referred to the Minneapolis VA Health Care System for veteran benefits and the services provided here. In 2014 the St Cloud VA Medical Center referred 62 patients to MVAHCS for cancer diagnostic or treatment services.

FACILITY REFERRED FROM 2014	
St Cloud VA Medical Center	62
Black Hills VA Medical Center	2
Abbott Northwestern Hospital	2
Fargo VA Medical Center	5
Saint Mary's Hospital - Duluth	3
Fairview University of Lakes	5
St. Joseph's Hospital	5
Mayo Clinic	7
Mercy Hospital	4
St Luke's Hospital of Duluth	4
Other Hospitals	32

Facility Referred To:

During 2014 many patients were referred elsewhere for treatment; either for specialty care, or for care closer to home. Below are some of the facilities that our patients were referred to based on Cancer Registry abstracting. The Camcer Registry software added a new field to document "fee basis" treatment in 2014. At least 109 patients received some type of fee basis treatment at non-VA facilities, including Stereotactic Body Radiation Therapy, Brachytherapy, Gammaknife treatment, Moh's Dermatology Surgery, Whipple pancreatic resections and other specialty procedures. Many patients had chemotherapy or radiation closer to home.

FACILITY REFERRED TO:	# OF PATIENTS
ABBOTT NORTHWESTERN HOSPITAL	17
FAIRVIEW HOSPITALS	53
ST CLOUD VA MEDICAL CENTER	11
MAYO CLINIC	9
BLACK HILLS VA MEDICAL CENTER	2
ST LUKE'S HOSPITAL OF DULUTH	2
ST CLOUD HOSPITAL	2
FARGO VA MEDICAL CENTER	2
OTHER HOSPITAL	26
Total:	124

Focus on Bladder Cancer

BLADDER CANCER FACTS

Incidence: Bladder cancer is 4 times more common in men than women and the incidence is higher in white men than in black men. Bladder cancer is the 4th most common cancer in men and the eighth most common in women. Bladder cancer is most common in the 50-70 year age range.¹

Detection: 70% of all patients have blood in their urine. Other symptoms include painful urination, urgency and sometimes pelvic discomfort after voiding.

Risk factors: Smoking is a well-established risk factor for bladder cancer. Certain occupational exposures also pose a risk. Risk is increased among workers using aniline dyes and benzidine, workers in the rubber and leather industries as well as painters and some metal workers. Previous cancer treatments such as pelvic irradiation and prior chemotherapy with Cytoxan are bladder cancer risk factors²

Survival: The overall 5 year survival rate for all stages is 77.4%. The 5 year survival rate for stage 0a or 0is bladder cancer is 95.9%.³

^{1,2} www.training.seer.cancer.gov

³ National Cancer Institute, Surveillance, Epidemiology, and End Results Program (seer.cancer.gov).

Histology and Stage at Diagnosis

In 2014 the Minneapolis VA Health Care System diagnosed and/or treated 68 new analytic cases of bladder cancer. Fifty-seven percent of all new bladder cancer cases were diagnosed at the, non-invasive or in-situ stage. Only 8.8% (6/68) were diagnosed at stage III or IV.

Histology of 2014 Bladder Cancer Cases	# of Cases	% of Total
PAPILLARY TRANSITIONAL CELL CA, NON-INVASIVE	37	54%
PAPILLARY TRANSITIONAL CELL CARCINOMA	16	24%
TRANSITIONAL CELL CARCINOMA IN SITU	2	3%
TRANSITIONAL CELL CARCINOMA, NOS	11	16%
OTHER OR UNKNOWN/CLINICAL DIAGNOSIS	2	3%
TOTAL CASES	68	100%

Stage at Diagnosis of Bladder Cancer at the MVAHCS in 2014	
Stage 0a	37
Stage 0 is	2
Stage I	18
Stage II	5
Stage III	3
Stage IV	3
Total Cases	68

TOBACCO USE

Of the new bladder cases diagnosed at the MVAHCS in 2014, 82 percent reported current or past use of tobacco products.

Tobacco Use In Bladder Cancer Patients					
Tobacco Use	2010	2011	2012	2013	2014
Cigar/pipe smoker, current	4	1			
Cigarette smoker, current	19	23	11	17	20
Combination use, current		2		1	
Previous Use	40	45	34	40	33
Snuff/Chew/Smokeless, Current			1	1	1
Tobacco Use, NOS					2
Unknown/not recorded	5	3	2	2	1
Never Used	1	7	6	4	11
Total Analytic Cases by Year	69	81	54	65	68

AGE AT DIAGNOSIS 2010-2013

Comparing the MVAHCS data for age at diagnosis against all NCDB hospitals, we show a somewhat higher number of cases of bladder cancer diagnosed in the 60-69 year age group. MVAHCS had 36% in this age group compared to 26% in the NCDB. We had fewer cases diagnosed under the age of 60.

When we compare ourselves to other VA approved cancer programs, the VA nationwide had 42% of patients diagnosed in the 60-69 year age range.

Age Group at Diagnosis 2010-2013, as compiled by the ACOS/CoC NCDB								
	< 30	30-39	40-49	50-59	60-69	70-79	80-89	90 and >
MVAHCS			1%	8%	36%	28%	23%	4%
NCDB (all facilities)		1%	3%	12%	26%	30%	23%	4%
VA (51 approved programs)			1%	10%	42%	25%	18%	3%

Stage at Diagnosis 2010-2013

Data for stage at diagnosis at the Minneapolis VA Health Care System is very similar to that for all NCDB hospitals and all approved VA cancer programs.

Stage Group at Diagnosis 2010-2013						
MVAHCS compared to the NCDB & VA (compiled by the ACOS/CoC NCDB)						
	Stage 0	Stage I	Stage II	Stage III	Stage IV	Unknown
MVAHCS	54%	23%	11%	3%	5%	3%
NCDB (1,482 hospitals)	49%	22%	12%	5%	7%	5%
VA Cancer Programs (51 approved sites)	49%	26%	10%	4%	7%	4%

Treatment of Bladder Cancer

The most commonly used therapies for early stage bladder cancer are surgery alone or surgery in combination with chemotherapy (such as Mitomycin) or immunotherapy agents (such as BCG) instilled directly into the urinary bladder. At MVAHCS more patients received mixed modality therapy.

Top 3 Bladder Cancer Treatments, MVAHCS compared to NCDB and VA 2010 – 2013			
	Surgery Alone	Surgery & Chemotherapy	Surgery & Immunotherapy (BRM)
MVAHCS	41.29% (n=109)	20.45% (n=54)	20.08% (n=53)
NCDB (1,482 Hospitals)	59.57% (n=118,422)	18.26% (n=36,311)	9.07% (n=18,029)
VA (51 programs)	49.56% (n=3,262)	16.71% (n=1,100)	15.01% (n=988)

The more complete breakdown of treatments by stage follows:

First Course of Treatment for Bladder Cancer by Stage								
Minneapolis VA Health Care System 2010 to 2013								
Years 2010- 2013	Stage Group at Diagnosis						Totals	
First Course of Treatment	0	I	II	III	IV	UNKN	N	%
Surgery Alone	69	17	17	1	3	2	109	41.29%
Surgery & Chemo	28	8	7	6	4	1	54	20.45%
Surgery & Immuno (BRM)	29	23	1				53	20.08%
Surgery, Chemo & Immuno	11	12			1		24	9.09%
No 1st Course RX		1			3	4	8	3.03%
Surgery & Radiation		1	2			1	4	1.52%
Surgery, Rad, & Chemo			3		1		4	1.52%
Other Specified Therapy	4						4	1.52%
Active Surveillance	2						2	0.76%
Radiation Only					1		1	0.38%
Totals:							263	100%

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Cancer Registry

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